

Potentiometric Surface Map of the Unconsolidated Aquifers of Pulaski County, Indiana

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Pulaski County, Indiana is located in the northwestern portion of the state with most of the areal extent situated within the Upper Wabash River Basin. However, a portion of the northwest corner and the north-central part of the county is within the Kankakee River Basin.

The mapped potentiometric surface (PSM) contour elevations represent lines of equal elevation relative to the measured groundwater levels in wells. In general, wells completed in a confined aquifer system are bound by impermeable layers and will have static water levels under hydrostatic pressure causing the water level to rise above the elevation of the aquifer resource. In contrast, an unconfined aquifer system is not bound by impermeable layers; therefore, the water level will not be under hydrostatic pressure and will not rise above the aquifer resource. Static water level measurements in individual wells used to construct the potentiometric surface map are indicative of the water level at the time of well completion. Therefore, current site specific conditions may differ due to local or seasonal variations in measured static water levels.

Coordinate locations of water well records were physically obtained in the field, determined through address geocoding, or reported on water well records. Elevation data were either obtained from topographic maps or a digital elevation model (DEM). Elevation and location quality control/quality assurance procedures were utilized to refine or remove data where errors were readily apparent.

In Pulaski County well depths 100 feet or less were a priority in mapping the potentiometric surface. However, portions of western Pulaski County are lacking in data and/or are covered by deposits that have limited to non-existent aquifer potential. Therefore, potentiometric surface elevations contours have not been extended through these areas. There are approximately 781 unconsolidated water well records in the county located that are within the priority depth range.

Potentiometric surface elevations range from a high of 730 feet mean sea level (msl) along the east-central region of the county continuing to the southeast corner, to a low of 660 feet msl in the south-central part of the county along the Tippecanoe River. Generalized groundwater flow direction for Pulaski County is towards major drainage relevant to the basin. Therefore, in the Upper Wabash River Basin, groundwater flow is towards the Tippecanoe River. However, for portions of the county within the Kankakee River Basin, groundwater flow is generally north and northwest out of the county towards the Kankakee River.